

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (original) A method of integrating software systems comprising:  
identifying a scope of the integration based on a multi-level top-down approach;  
identifying faults in business rules that define software in the scope of the integration by applying generic depth-first search (DFS)-based techniques to the business rules; and  
modifying the business rules based on the identified faults.
2. (currently amended) The method of claim 1, ~~wherein~~ where identifying faults in the business rules includes:  
representing the business rules using a transition-directed graph (TDG) representation.
3. (currently amended) The method of claim 1, ~~wherein~~ where the multi-level top-down approach includes:  
a first level that includes high-level software systems.
4. (currently amended) The method of claim 3, ~~wherein~~ where the multi-level top-down approach further includes:  
a second level that includes business processes of the high-level software systems.

5. (currently amended) The method of claim 4, ~~wherein~~ where the multi-level top-down approach further includes:

a third level that includes business rules that are defined as transitions in the business processes;

a fourth level that includes interface functions that define communications between the business rules; and

a fifth level that includes data used by the business rules and the interface functions.

6. (original) The method of claim 4, further including:

comparing the business processes to locate similar business processes that are to be integrated.

7. (currently amended) The method of claim 1, ~~wherein~~ where identifying the scope of the integration is performed on software systems from multiple merging entities.

8. (currently amended) The method of claim 1, ~~wherein~~ where the identified faults include faults of at least one of inconsistency, contradiction, circularity, subsumption, redundancy, ~~[[and]]~~ or incompleteness.

9. (currently amended) A computer-implemented system for integrating information distribution systems comprising:

means for assisting a user to identify a scope of the integration using a multi-level top-down approach, the identified scope including a set of business processes that are to be integrated and a set of business rules that define the business processes; and

a fault detection component configured to identify faults in the business rules by applying generic depth-first search (DFS)-based techniques to the business rules.

10. (currently amended) The computer-implemented system of claim 9, ~~wherein~~ where the fault detection component is further configured to represent the business rules using a transition-directed graph (TDG) representation.

11. (currently amended) The computer-implemented system of claim 9, ~~wherein~~ where the multi-level top-down approach includes:

a first level that includes high-level software systems.

12. (currently amended) The computer-implemented system of claim 11, ~~wherein~~ where the multi-level top-down approach further includes:

a second level that includes the business processes, which define the high-level software systems.

13. (currently amended) The computer-implemented system of claim 12, ~~wherein~~ where the multi-level top-down approach further includes:

a third level that includes the business rules defined as transitions in the business processes;

a fourth level that includes interface functions that define communications between the business rules; and

a fifth level that includes data used by the business rules and the interface functions.

14. (currently amended) The computer-implemented system of claim 12, ~~wherein~~ where the means for assisting compares the business processes to locate similar business processes that are to be integrated.

15. (currently amended) The computer-implemented system of claim 9, ~~wherein~~ where the scope of the integration is defined for software systems from multiple merging entities.

16. (currently amended) The computer-implemented system of claim 9, ~~wherein~~ where the identified faults include faults of at least one of inconsistency, contradiction, circularity, subsumption, redundancy, ~~[[and]]~~ or incompleteness.

17. (original) A method of integrating information distribution systems of merging entities, the method comprising:

identifying top-level software systems that are to be integrated;

identifying business processes in the top-level software systems;

comparing the identified business processes to determine business processes that are related enough to be candidates for integration;

identifying business rules that define the business processes; and  
identifying faults in the business rules by applying generic depth-first search  
(DFS)-based techniques to the business rules.

18. (original) The method of claim 17, further comprising:

modifying the business rules based on the identified faults.

19. (currently amended) The method of claim 17, ~~wherein~~ where comparing the  
identified business processes includes finding pairs of business processes that perform  
~~substantially the same or~~ similar functions.

20. (currently amended) The method of claim 17, ~~wherein~~ where the identified faults  
include faults of at least one of inconsistency, contradiction, circularity, subsumption,  
redundancy, ~~[[and]]~~ or incompleteness.

21. (currently amended) The method of claim 17, ~~wherein~~ where identifying faults in  
the business rules further includes:

representing the business rules using a transition-directed graph (TDG)  
representation.

22. (currently amended) A computer-readable medium consisting of a physical or  
logical memory device containing instructions for execution by one or more processors,  
the computer-readable medium including:

instructions for assisting a user to identify a scope of an integration of information distribution systems by using a multi-level top-down approach, the identified scope including a set of business processes that are to be integrated and a set of business rules that define the business processes; and

instructions for identifying faults in the business rules by applying generic depth-first search (DFS)-based techniques to the business rules.

23. (currently amended) The computer-readable medium of claim 22, ~~wherein~~ where the instruction for identifying faults represent the business rules using a transition-directed graph (TDG) representation.

24. (currently amended) The computer-readable medium of claim 22, ~~wherein~~ where the multi-level top-down approach includes:

a first level that includes high-level software systems.

25. (currently amended) The computer-readable medium of claim 24, ~~wherein~~ where the multi-level top-down approach includes:

a second level that includes the business processes, which define the high-level software systems.

26. (currently amended) The computer-readable medium of claim 25, ~~wherein~~ where the multi-level top-down approach includes:

a third level that includes the business rules defined as transitions in the business processes;

a fourth level that includes interface functions that define communications between the business rules; and

a fifth level that includes data used by the business rules and the interface functions.

27. (currently amended) The computer-readable medium of claim 22, ~~wherein~~ where the scope of the integration is defined for information distribution systems from multiple merging entities.

28. (currently amended) The computer-readable medium of claim 22, ~~wherein~~ where the identified faults include faults of at least one of inconsistency, contradiction, circularity, subsumption, ~~[[and]]~~ or incompleteness.